CORE

The Voice of Mineral Exploration/Winter 2017

PDAC 2017 CONVENTION: BRINGING THE WORLD'S MINERAL AND FINANCE INDUSTRY TOGETHER

A BRIGHT FUTURE FOR NORTHERN INFRASTRUCTURE

INDUSTRY NEWS AND HIGHLIGHTS

PDAC AWARDS

Celebrating the industry's best

PDAC

PROSPECTORS & DEVELOPERS ASSOCIATION OF CANADA

CORE

The Voice of Mineral Exploration
Winter 2017

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INDUSTRY NEWS

Review of flow-through shares and METC

The Government of Canada conducts a review of all tax expenditures throughout the fall, including the flow-through share system and 15% Mineral Exploration Tax Credit (METC). PDAC is actively involved in showcasing to Finance Canada the importance of flow-through shares and the METC to the industry. As part of its advocacy campaign, PDAC:

- Sent out a questionnaire to exploration companies across Canada to collect data on how super flow-through shares are used. The questions focused on the importance of flow-through shares in:

  1. **Funding discoveries of new deposits**
  2. **Creating economic opportunities across the country; of the 54 representatives who responded, 46 indicated they had raised flow-through financing in the last 20 years**

- Conducted interviews with CEOs, CFOs and executives of Canadian mining companies to gather more information and clarify responses from participants of the questionnaire. The interviews gathered additional information on three topics:

  1. **Financing deals**
  2. **Exploration work carried out with flow-through funds**
  3. **Socio-economic benefits of the exploration work**

- Examined two case studies—Agnico Eagle's Meadowbank gold mine and Thompson Creek Metals' Mt. Milligan copper and gold mine—to showcase how flow-through shares contributed to the discovery and development of a mineral deposit into an operating mine.

- Made a formal submission to Finance Canada in October 2016.

PDAC MENTOR PROGRAM

PDAC launched a Mentor Program in late fall, a new initiative to connect student members with more experienced geoscientists. The aim is to strengthen the mineral exploration and development community and provide a link for members to share industry knowledge.

Federal Budget 2017

In a submission to the Standing Committee on Finance in October, PDAC made recommendations for Federal Budget 2017 to support the mineral exploration and development sector. Specifically, the association recommends sustaining Canada's flow-through financing system, renewing the METC for one year, increasing investment in infrastructure to support mineral exploration in remote and northern Canada, and making social investments to support Aboriginal participation in the industry.

Proposed update to U.S. mining disclosure rules

The Securities and Exchange Commission (SEC) proposed revisions to modernize U.S. property disclosure requirements in October that are intended to align the U.S. with global industry standards. PDAC's submission notes that the proposed changes deviate from existing disclosure standards (such as NI 43-101), and if adopted in the form originally proposed, may create more problems than they solve.

PAN-CANADIAN PRICING FOR CARBON POLLUTION

The Government of Canada proposed a pan-Canadian approach to pricing carbon in October to support its international climate commitments as announced under the Paris Agreement. PDAC has been working with its members to understand the impact of this proposal on mineral exploration in Canada, and established a working group to responsibly address this issue. PDAC continues to work with members to identify opportunities to improve environmental performance, and supports the International Council on Mining and Metals policy on climate change.

Government of Canada's Infrastructure Plan

In the Fall Economic Statement tabled in November 2016, plans for the establishment of a Canada Infrastructure Bank are announced. PDAC has advocated for the initiative since 2013 as a way to develop and unlock the resource potential of northern and remote Canada, and the announcement coincides with the association's release of *Unlocking northern resource potential: The role of infrastructure*.

About the Canada Infrastructure Bank:

- It will make investments in revenue-generating infrastructure projects and plans that contribute to the long-term sustainability of infrastructure across the country.
- It will work with provincial and territorial governments and municipalities to reach funding directed to infrastructure.
- It will involve governments and investors working together to identify a pipeline of potential projects and identify investment opportunities that provide the biggest economic, social and environmental returns.
- It is a key component of *Investing in Canada*, concluding and executing complex infrastructure deals using a wide breadth of financial instruments at its disposal, including loans, loan guarantees and equity investments.
- It will be accountable to government, but will operate at arm's length, working with provincial, territorial, municipal, Indigenous and investment partners.

Review of Environmental Assessment Processes

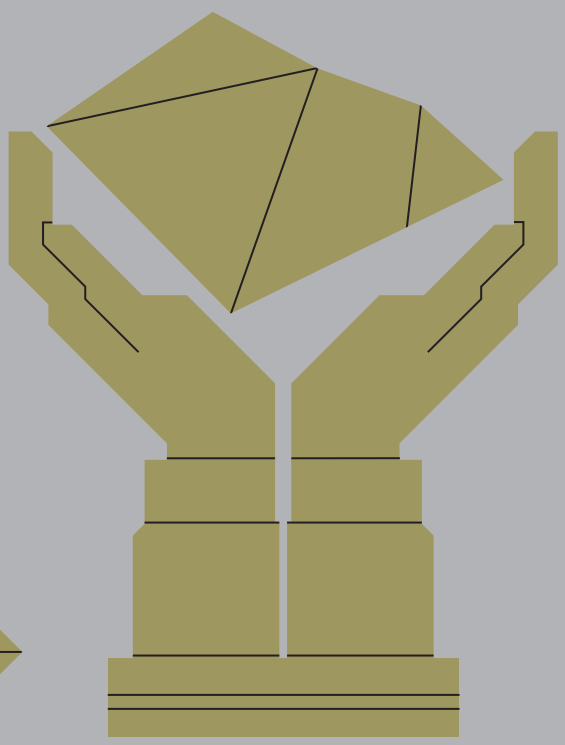
The Government of Canada has begun a review of federal environmental and regulatory processes. PDAC engaged in these reviews and will continue to advocate for a credible and efficient regulatory system in Canada.

PDAC AWARDS

Celebrating the industry's best

The PDAC is pleased to announce its 2017 award recipients in seven categories for their outstanding contributions to the mineral exploration and mining industry.

Recipients will receive their awards and be celebrated at the Awards Gala & After Party during the PDAC 2017 Convention on March 7 at the Fairmont Royal York in Toronto.



THAYER LINDSLEY AWARD

This award recognizes an individual or a team of explorationists credited with a recent significant mineral discovery anywhere in the world.

PETER MEGAW, MAG SILVER CORP

For the 2003 discovery of the 200 million ounce Juanicipio silver deposit in the Fresnillo District, Mexico, ultimately leading to a further 600 million ounces being identified in the immediate area.

In 2003, Peter Megaw, a Professional Geologist and co-founder of MAG Silver, made a blind discovery known as the Juanicipio silver deposit that contains more than 200 million ounces silver. The discovery resulted from an understanding of structural controls and mineral zoning patterns of epithermal vein systems and persistent application of field-based exploration methods.

The Juanicipio silver deposit was discovered in the 500 kilometre-long Fresnillo epithermal belt in Mexico, extending from the Guanajuato district (1.3 billion oz Ag) through Zacatecas (1.0 billion oz Ag) and Fresnillo (1.2 billion oz Ag) to the San Martin-Sabinas district (800 million oz Ag). The belt overlies a regional structural zone and is the most productive silver deposit trend in the world, yielding more than 10% of the silver mined in human history. All but two of the major silver deposits in the Fresnillo silver belt were discovered in outcrop during Colonial times. Peter recognized that there should be more under the alluvium that mantles two thirds of the belt. Most of the intrusive centres and ore deposits occurred at structural intersections, and Peter suggested that exploration focus on understanding the structural fabric of exposed areas and then apply the results to covered areas. Thus, the structural and alteration patterns of historic mining areas were projected into nearby covered ground, with target depths indicated by using the results of detailed studies by others of paleo groundwater levels.

Peter first recognized the potential of the Juanicipio area in 1995, but it took three years to acquire the ground. Mapping, sampling and geophysical surveys began in 1998 with target definition and drill permitting completed in 2001. A hiatus set in until MAG Silver was established in July 2002 and began drilling in May 2003, shortly after going public. The first hole intersected the Juanicipio vein, demonstrating that Megaw's model was right. A joint venture with Fresnillo plc commenced in 2005, and the really big vein was hit by the JV on the sixteenth drill hole.

Megaw's other discoveries in Mexico include the La Platosa silver deposit in Durango (Mexico's highest grade silver mine), and Cinco de Mayo in Chihuahua. Both lie in the Mexican carbonate replacement belt, and further demonstrate Megaw's systematic, disciplined and long-term exploration approach.

As a result of Peter's Juanicipio discovery, renewed exploration of neighbouring ground led to new veins being identified and a further 600 million ounces defined and developed into mines. The Juanicipio mine itself should start production in 2018 with silver grades in excess of 500 grams per tonne and significant by-product gold, lead and zinc. The access decline is nearly complete and stope development will begin in 2017.

SKOOKUM JIM AWARD

Recipients of this award have demonstrated exceptional achievement and/or service in a Canadian Aboriginal-run service business for the Canadian mining industry or a Canadian Aboriginal exploration or mining company, or have made a significant individual contribution to the mining industry.

PETER MOSES

For his significant contribution to Canada's mineral exploration and mining industry through his work with companies, government, and Aboriginal communities over a career of more than 50 years.

Peter Moses is an active member of Canada's mineral exploration and mining community. His work as a prospector started early in life when he worked on the family's trapline. Learning from his father and grandfather, Peter's interest in geology grew and would eventually become the basis of a prolific career spanning more than four decades.

The industry is in Peter's blood. He is a fourth generation family member connected to exploration and mining, dating back to his great-grandfather in 1860. In 1964, Peter became one of the first members of his community to succeed in completing a post-secondary education. He began prospecting on his own and also partnering with local team members in the Pic River and Marathon region. Often, he led a prospecting team on extremely rugged terrain, including the North Shore of Lake Superior.

Over 35 years as a part-time prospector, Peter successfully promoted, negotiated and executed 34 option agreements between his partners and junior and major mining companies throughout Canada and the United States. Additionally, he provided prospector training, staking and geoscience (exploration) information workshops to 123 of the 134 First Nation communities in Ontario, as well as the Métis Nation of Ontario. He developed the entire curriculum with the support of other industry associations.

Peter is credited with fostering positive relationships between industry and Aboriginal communities. His impact transcends provincial boundaries, as he networks nationally within the Canadian Aboriginal Minerals Association (CAMA). Outside of CAMA, Peter works in partnership with various industry, government and First Nations organizations, such as PDAC, Northwestern Ontario Prospectors Association (NWOPA), Boreal Prospectors Association (BPA), the Ontario Prospectors Association (OPA), Ministry of Northern Development and Mines (MNDM), Nishnawbe Aski Development Fund, Matawa Tribal Council, and Confederation College and Lakehead University.

Currently, Peter is the Mineral Development Information Officer for Matawa First Nations Management. Here he continues to build on the relationships and accomplishments of the past 50 years, providing perspective and advice on mineral development to the nine Matawa First Nation communities in Northern Ontario, including projects such as the Ring of Fire, Hard Rock Mine Project and the Albany Graphite Deposit.

Peter's past achievements include the Lifetime Achievement Award from NWOPA in 2008, Ontario's Amethyst Award for Outstanding Achievements by Ontario Public Servants in 2009, team recipient of MNDM Group Award, and a Certificate of Appreciation by PDAC in 2009.

SPECIAL ACHIEVEMENT AWARD

From time to time, PDAC presents a Special Achievement Award that recognizes exceptional contributions to the mineral industry.

WOMEN'S ASSOCIATION OF THE MINING INDUSTRY OF CANADA (WAMIC)

For continuous philanthropy to the mining industry, as well as Canadian health and educational institutions for 95 years.

WAMIC was founded in 1921 with the objective of promoting friendship among women connected to mining, supporting the industry and people in it, and participating in work that related to the well-being of Canadians.

Over the past 95 years, WAMIC members have overseen the distribution of more than $1.8 million in support of young peoples' education, most of which was raised directly by their efforts. WAMIC is probably

best known for its fundraising, its numerous and imaginative social events, and the association's strong presence at both the PDAC and Canadian Institute of Mining, Metallurgy and Petroleum conventions in Toronto. WAMIC was also the inspiration for the similar Greater Vancouver Mining Women's Association in British Columbia.

While the role of the association has evolved in recent years, it continues to make a significant impact. WAMIC has provided financial support for hundreds of students undertaking earth science and mining-related subjects and programs at colleges and universities across Canada. Canadian students attending Michigan Technological University and the South Dakota School of Mines in the United States have also received financial support. Furthermore, university and college programs have received direct contributions for field trips, technology and educational events.

In 1939, WAMIC established its first bursary at the University of Toronto. Named after WAMIC's founder Edith Tyrrell, the annual award continues today and provides a significant benefit to a third- or fourth-year student in the mineral engineering or geology programs.

WAMIC's generosity continues to support many good causes. Special emphasis has always been given to those involving education, health, women and children, Aboriginal communities and museums, such as the B.C. Museum of Mining (now the Britannia Mine Museum) and the Royal Ontario Museum.

WAMIC began from very humble beginnings as a simple meeting of women connected to the mining industry. Despite a changing world, it still provides friendship amongst mining women and supports worthy causes, while its legacy continues to assist the next generation of mineral exploration and mining professionals in Canada.

DISTINGUISHED SERVICE AWARD

This award recognizes an individual who has achieved one or more of the following: made a substantial contribution to mineral exploration and mining development over a number of years; given considerable time and effort to the PDAC; made outstanding contributions to the mineral industry in the field of finance, geology, geophysics, geochemistry research, or a related activity.

NEIL GOW

For using his vast knowledge and experience as a respected geologist to volunteer for the betterment of the mineral exploration and mining industry in Canada.

Neil Gow is a geologist who served the mineral exploration and mining industry in an exemplary fashion. He started his career in Australia before making his way to Canada in 1982. For the most part since then he has been an independent consulting geologist based just outside Toronto in Burlington.

Neil is well-known for his work in lead-zinc, laterite and gold deposits, which included valuation reports for potential investment by clients and independent qualifying reports. Yet, it's his many generous volunteer commitments that make him a standout in his field.

For the past 12 years, Neil has volunteered on the PDAC Convention Planning Committee, and chaired numerous Technical Sessions at the PDAC Convention. For around 15 years he was Secretary-Treasurer of the Toronto Geological Discussion Group, where he organized bi-weekly presentations on various economic and exploration topics.

And it doesn't stop there. Serving as Chairman of the Mineral Resource and Reserves Committee at the Canadian Institute of Mining, Metallurgy & Petroleum (CIM), Neil was part of the team that wrote the *Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines* to assist in the planning, supervision, preparation, and reporting of Mineral Resource and Mineral Reserve (MRMR) estimates, which were adopted in 2003. He was also a panel member of a committee for the Ontario Ministry of Northern Development and Mines to identify guidelines for areas having the most likely potential for mineral discovery.

The extensive volunteer contributions of this one individual over the last 30 years are invaluable to the ongoing development of the industry.

VIOLA R. MACMILLAN AWARD

This award, which is named in honour of the PDAC's longest-serving President, is given to an individual or organization demonstrating leadership in management and financing for the exploration and development of mineral resources.

GAHCHO KUÉ DIAMOND MINE, DE BEERS GROUP OF COMPANIES & MOUNTAIN PROVINCE DIAMONDS

For development of the world's largest new diamond mine in the last 13 years, a complex project that is expected to produce approximately 54 million carats of rough diamonds over its lifetime.

Gahcho Kué Diamond Mine in Canada's Northwest Territories (NWT) officially opened in September 2016. It is a joint venture between the De Beers Group of Companies, a privately-owned diamond exploration, mining, rough diamond sales and retail company that owns 51% of the project; and Toronto-based Mountain Province Diamonds, that owns the remaining 49%. Mountain Province discovered the first kimberlite at Gahcho Kué in 1995 and entered into a joint venture with De Beers in 1997. Gahcho Kué is the world's largest new diamond mine in 13 years and is expected to produce approximately 54 million carats of rough diamonds during its initial 12-year lifespan. It is comprised of three open pits and is on track to reach full commercial operation in the first quarter of 2017.

The US$1 billion exploration, delineation and construction of Gahcho Kué was no small undertaking. Most of the supplies were brought in via an ice road from Yellowknife—approximately 280 kilometres away—and sometimes took more than 20 hours to transport. The ice road season typically lasts between just six and eight weeks, making the window of opportunity very short. Despite these challenges, the project was completed ahead of time, and under budget. It also proudly recorded no serious injuries and achieved a lost-time injury rate of 0.15 and has not recorded a lost-time injury in over one million work hours.

The mine brings many benefits to the region and to all of Canada, by employing 530 full-time positions on a fly-in, fly-out rotation. During its construction, between 2006 and 2015, construction of the mine provided $440 million to the NWT economy, and another $350 million across Canada. Once fully operational, estimates are equivalent to $5.7 billion in Gross Value Added to the NWT. Including its supply chain impacts, the mine supported more than 2,700 jobs, with employment at the site representing more than 10 per cent in the NWT's extractive industries. As of October 2016, while still ramping up to full production, the De Beers workforce at Gahcho Kué already had 46% representation of NWT-resident employees, 20% self-identified Indigenous employees and 14% female employees.

Gahcho Kué is De Beers' largest ever mine outside of southern Africa. It will offset declining production at the company's other two Canadian diamond operations. It is Mountain Province Diamonds' first ever mine. Canada is the world's third largest diamond producer, and Gahcho Kué is the sixth commercial diamond mine in the country. It will account for 3% of the world's diamond market.

ENVIRONMENTAL & SOCIAL RESPONSIBILITY AWARD

This award honours an individual or organization demonstrating outstanding initiative, leadership and accomplishment in protecting and preserving the natural environment and/or in establishing good community relations during an exploration program or operation of a mine.

TERANGA GOLD CORPORATION

For outstanding community relations and making proactive, lasting contributions to the communities and surrounding regions of its Sabodala Gold Mine in Senegal, West Africa.

The Sabodala Gold Mine is the first and only gold industrial mine in Senegal. Teranga Gold Corporation has operated the mine since 2009, and has established itself as a leader in community relations and responsible mining practices.

In its *2015 Sustainability Report*, Teranga acknowledges that it is operating as a guest in Senegal, and the right to be there must be earned. This is reflected in the company's approach to mining, which begins by creating a culture of risk mitigation and shared long-term value with host communities.

Teranga employs more than 1,000 people from Senegal, most of who are from the two regions near the mine, and delivers more than 40 training programs to develop employee skills, literacy and numeracy. Women comprise 9% of the workforce at the Sabodala mine site, and are represented across all departments.

Through the creation of a Regional Development Strategy, Teranga identified ways to further contribute to sustainable growth and development. The company

launched initiatives aimed at the growth of small businesses and service providers to feed its local supply chain, and proactively sought partnerships with government, international and local NGOs, and other organizations with similar interest in supporting the long-term, socio-economic development of the region. One such partnership, the Canadian Cooperation Roundtable, was supported by Teranga and gathered together 30 Canadian industry and civil-society actors with an interest in the region where the Sabodala mine is located. The Roundtable aimed to facilitate collaboration and information-sharing and contributed to the advancement of 20 different development projects. One such project was a partnership between Teranga and the Paul Gérin-Lajoie Foundation, which aims to provide 50 youths in the region with hands-on vocational training in agricultural skills and technical maintenance.

Teranga is working closely with the Government of Senegal as it introduces its Emerging Senegal Plan, which includes implementing the *Extractive Industries Transparency Initiative*. Furthermore, support from Teranga and the Embassy of Canada in Senegal has enabled the creation of three long-term land use management strategies and development plans in partnership with department-level governments in the area of the mine.

Teranga also employs a Social Fund, managed in partnership with local administration and community representatives, to support small-scale, sustainable community development projects. In 2013, more than $1.79 million was invested through the Teranga Social Fund. By 2015, it was over $4.48 million, with an annual commitment of $1.57 million going forward.

AGNICO EAGLE

BILL DENNIS AWARD

This award, named for a former president of the association, honours individuals who have accomplished one or both of the following: made a significant mineral discovery; made an important contribution to the prospecting and/or exploration industry.

VAL D'OR EXPLORATION DIVISION, AGNICO EAGLE MINES LIMITED

For discovery of the Amaruq gold deposits in the Amer Lake Basin in Nunavut, Canada.

The high-grade Amaruq deposits represent a significant gold discovery in Nunavut, and are one of the few recent large gold discoveries in Canada. Agnico Eagle Mines Limited's Val d'Or Exploration Division made the discoveries between 2013 and 2016 while prospecting a virtually unexplored part of the Woodburn Lake Belt, 350 kilometres west of Hudson Bay.

The 1,167-square-kilometre Amaruq property includes the robust Whale Tail mineralized system and between 100 and 800 metres north run three parallel gold zones named I, V, and R (IVR). Inferred resources are estimated at 19.4 million tonnes grading 5.97 grams per tonne gold for a total of 3.7 million ounces of gold. Ore-grade drill results include a hole that intersected 47.6 metres estimated true width grading 5.9 grams per tonne gold, at 288 metre depth in the Whale Tail deposit. This illustrates the potential for this to become a giant deposit. Drilling in 2016 indicated that Whale Tail mineralization extends for at least 2.2 kilometres along strike from surface to locally as deep as 730 metres. The highlight of the project for 2016 was the discovery of additional lenses in the V Zone, which dips shallowly toward Whale Tail from surface to 540 metres locally, improving its potential as a second source of open pit ore.

The exploration program originally targeted the IVR gold after reviewing public geological maps and assessment reports. An initial exploration program in 2013 consisted of prospecting, mapping, and a small ground geophysical survey (Mag-EM). A four-hole diamond-drill program targeted the best conductors and the fourth hole intersected gold mineralization. Additional budget was allocated to drill another 10 holes later that year that identified three mineralized zones; I, V and R. The project has grown quickly since then, with significant investment.

In addition to the IVR deposit and Whale Tail, the Val d'Or Exploration Division discovered two more zones of mineralization at nearby Mammoth Lake. Samples from a boulder field north of Mammoth Lake contained visible gold, adding to the resource potential of the area.

The excitement of the discovery is heightened by the timing and location. Reserves at the Meadowbank Gold Mine—one of Agnico's largest gold producers—are expected to be depleted during 2018. Meadowbank is conveniently located just 50 kilometres southeast of Amaruq, meaning much of the essential infrastructure for a producing mine is already in place. Construction of a 62 kilometre access road is underway to connect the mine to Amaruq. **c**

PDAC 2017 Convention

Photos: envisiondigitalphoto.com

NEW OPPORTUNITIES. NEW HORIZONS.

A renewed sense of optimism is flowing through our industry as we enter 2017, buoyed by rising iron ore, zinc and copper prices, along with the potential for increased government infrastructure spending. Project acquisitions continue with consolidation in the market and assets changing hands, as well as junior market activity being rekindled.

The timing is thus excellent for a meeting of global mining and financial communities at the PDAC 2017 Convention at the Metro Toronto Convention Centre (MTCC) in Toronto, Canada from March 5 to 8. This year's event marks the convention's 85th anniversary and, with market activity and capital liquidity increasing, I expect we will surpass the number of attendees of the past two years.

We are delighted to have more than 40 sponsors. On behalf of the PDAC, I would like to thank our Diamond sponsor Teck Resources Limited, our Platinum sponsors Barrick Gold Corporation and Goldcorp Inc., and our Patron sponsors BMO Capital Markets, Caterpillar, IBK Capital Corp., TMX Group and Vale Canada Limited. I would also like to thank and welcome back our Mining Country Sponsors Peru, Ecuador and Chile.

PDAC 2017 will feature more than 900 exhibitors, with over 400 at the Investors Exchange and 500 at the Trade Show. Our Trade Show will take place in the South and North Buildings at the MTCC, and will include the Northern Ontario Mining Showcase regional pavilion with 100 booths.

The range of Short Courses will include an SEG workshop focused on *World-class gold deposits* (March 3) and, for the first time, a MERC workshop that will address *New exploration methods for base and precious metal deposits* (March 5). Other Short Courses will cover *Applied structural geology in exploration and mining*, and *Improving strategic capital management with integrated valuation and risk modeling methods* (both on March 3).

In keeping with tradition, PDAC 2017 will offer an outstanding Technical Program with invaluable educational and networking opportunities for attendees. Highlights will include Mark Cutifani, Anglo American, leading off the *Commodities and Market Outlook* session (March 5), and Mark Bristow, Randgold Resources Limited, Lukas Lundin, Lundin Mining Corporation, and Roque Benavides Ganoza, Buenaventura, speaking during the *Keynote Session* (March 6) followed by Dr. Dambisa Moyo presenting at the Mineral Outlook Luncheon. In addition, a special symposium dedicated to Richard W. Hutchison will focus on volcanogenic and exhalative deposits (March 7).

And don't forget about the convention's excellent networking events, such as the Opening Day and Trade Show Receptions (March 5 and 6), the Mineral Outlook Luncheon (March 6), and the Awards Gala & After Party (March 7). New for 2017 is a free event—the Grand Finale (March 8) where you can relax and enjoy yourself after four exhilarating days at the world's premier mineral exploration and financial convention.

I look forward to seeing you there!

Dr. James Siddorn, PGeo
President of SRK Consulting (Canada) Inc. and Chair of the PDAC's Convention Planning Committee

PDAC 2017

International Convention, Trade Show & Investors Exchange
March 5 – 8 Metro Toronto Convention Centre, Toronto, Canada
Register at www.pdac.ca/convention

Attending **PDAC 2017** is a great **business decision**!

GAIN VALUABLE INSIGHT ON **INVESTING** IN THE **MINERALS AND MINING** SECTOR FROM **INDUSTRY LEADERS**

Corporate Presentation Forum for Investors
Discover up-to-the-minute information on select exploration and development companies current activities and investment potential.

Letter Writer Presentations for Investors
Hear tips from leading industry commentators as they present ideas on how to invest in the resource sector.

LISTEN TO **500 ENGAGING PRESENTATIONS** AND **INFORMATIVE COURSES** LED BY **INDUSTRY EXPERTS** AND **EARN** PROFESSIONAL **DEVELOPMENT CREDITS**

Mark Cutifani
Anglo American

Don't miss any of the Technical Program sessions especially:

Commodities and Market Outlook
Mark Cutifani is just one of the presenters who will be on hand for this session.

Keynote Session
What drives success in our industry?

Presenters include:

Lukas Lundin
Lundin Mining Corporation

Mark Bristow
Randgold Resources Limited

Roque Benavides Ganoza
Buenaventura

Short Courses
Register for in-depth, educational courses led by expert presenters. A certificate of completion is available towards your professional development hour requirements. Dates, times and prices vary.

"No other industry event in the world comes close to the PDAC Convention in terms of programs offered, companies and countries present, and overall the number of delegates attending."

Attendee

VISIT OVER 900 EXHIBITS PROMOTING TECHNOLOGY, PRODUCTS, SERVICES, CLAIM RESULTS, EXPLORATION AND INVESTMENT OPPORTUNITIES

Core Shack | Investors Exchange
Mining Marketplace | Prospectors Tent
Trade Show & Trade Show North

ATTEND EVENTS LIKE THE MINERAL OUTLOOK LUNCHEON AND AWARDS GALA & AFTER PARTY!

Dr. Dambisa Moyo
Global Economist and Author

Don't miss the **Mineral Outlook Luncheon** on Monday, March 6. Guest speaker Dr. Dambisa Moyo—Global Economist and one of *TIME*'s 100 Most Influential People and *New York Times* best-selling author—will discuss the future of the mining industry based on the current economic forecast.

Awards Gala & After Party
Meet with the who's who in the global mining industry and celebrate industry excellence with the 2017 Award Recipients at the **Awards Gala & After Party** on Tuesday, March 7.

NETWORK WITH OVER 22,000 INDUSTRY PROFESSIONALS

Rub shoulders and network one-on-one with industry professionals from around the world, including investors, financiers, banking executives, fund managers, brokers, analysts, lawyers, mining developers, exploration managers, prospectors, geoscientists, government officials, media and more.

Free Networking Events

Opening Day Reception
Sunday, March 5

Trade Show Reception
Monday, March 6

Grand Finale NEW
Wednesday, March 8

5,600
International Attendees

125
Countries Represented

"The networking that goes on during those four days results in countless new relationships and ideas, reinforces current partnerships and sets the stage for a great many deals."

Attendee

Top participating countries outside Canada

Need professional development hours to maintain your professional designation?
Upon request, PDAC will provide a certificate of completion for the Technical Program and Short Courses to help you meet your professional development requirements.

Technical Program

Attendees will learn next and best practices while industry experts share timely insights during these dynamic series of presentations.
For more information on the Technical Program, visit **www.pdac.ca/convention/programming/technical-program**

SUNDAY, MARCH 5
- Commodities and market outlook
- Riches of the Iberian Peninsula
- A second opinion on the high-grade metamorphic potential of the Grenville

MONDAY, MARCH 6
- Opening Ceremonies
- Keynote Session: What drives success in our industry?
- Geometallurgy: With you every step of the way
- Seeking better mining outcomes in the next cycle
- Governance and transparency: Hot topics impacting the mining industry
- The future of exploration
- Diamonds in Africa: Part 2 – the rest of the story

TUESDAY, MARCH 7
- Adapting to operational risks and costs in a carbon-constrained world
- Update on new discoveries: What happened and why
- Specialty metals and minerals: Critical materials for new technology
- Volcanogenic and exhalative: A symposium dedicated to Richard W. Hutchinson
- Geophysics: New technologies and case histories
- Mining valuation: New perspectives and a global update

WEDNESDAY, MARCH 8
- Water in mining
- Successfully raising capital
- New discoveries and developments

NEW SHOW HOURS
March 5 – March 7 10 am to 5 pm
March 8 9 am to 12 noon

Short Courses

The Association of Professional Geoscientists of Ontario (APGO) considers participation by its members in these courses as an acceptable Continuing Professional Development activity. This program may be eligible toward the Law Society of Upper Canada's CPD Requirement as Substantive Hours. Please note that this program is not accredited for Professionalism Hours.

For more information and to register, visit **www.pdac.ca/convention/programming/short-courses**

FRIDAY, MARCH 3
- Applied structural geology in exploration and mining
- World-class gold deposits: How do they form and what do we need to know to find them?
- Improving strategic capital management with integrated valuation and risk modelling methods

SATURDAY, MARCH 4
- U.S. Mining Law: An in-depth overview and refresher of the U.S. Mining Law relating to the acquiring, developing, permitting, financing and closing of hard rock mining claims and projects in the U.S.
- Health and safety in mineral exploration

SUNDAY, MARCH 5
- New exploration methods for base and precious metal deposits: How to increase success in Greenstone Terranes

WEDNESDAY, MARCH 8
- Mining disclosure essentials: NI 43-101 reporting fundamentals, industry best practices and useful guidance for TSX and TSXV issuers
- DMEC workshop series: The value of regional data in terrane scale assessments

Exhibits

INVESTORS EXCHANGE

Interested in investing in the exploration industry? Discuss investment potential with over 350 junior mining companies, mid-sized producers, major mining companies, financial institutions and prospectors.

Exhibitors include:

- Barrick Gold Corporation
- Candente Copper Corp.
- Condor Gold Plc.
- Fission Uranium Corp.
- Goldcorp Inc.
- IAMGOLD Corporation
- Lundin Group of Companies, The
- Osisko Gold Royalties Ltd.
- Resource Capital Funds
- Richardson GMP – The Horwood Team
- Silver Wheaton Corp.
- Teck Resources Limited
- TMX Group

For a full list of Exhibitors, visit
www.pdac.ca/convention/investors-exchange

INVESTORS LOUNGE *NEW*

Located in the southeast area of the Investors Exchange, the lounge, with its contemporary elegance and comfortable furniture, will be the go-to place on the show floor to relax, meet colleagues, network and have informal meetings. A charging station for your hand-held device will also be available.

CORE SHACK

Located in the Investors Exchange for its second year, the Core Shack offers a venue for innovative companies to display their core samples. Attendees are welcome to get up close and personal with projects that are generating exciting new drilling results. In addition to core, Exhibitors will be displaying maps, charts and technical information on their drilling projects to interested attendees.

For a list of Exhibitors, visit
www.pdac.ca/convention/coreshack

MINING MARKETPLACE

Mining Marketplace offers Trade Show eligible companies an opportunity to exhibit in a feature area located in the Investors Exchange.

For a list of Exhibitors, visit
www.pdac.ca/convention/miningmarketplace

Attend PDAC 2017 and meet with over 900 Exhibitors

PROSPECTORS TENT

Get back to the heart of the industry with a visit to the Prospectors Tent. Located in the Investors Exchange, self-employed and independent prospectors will be there to discuss their maps, samples and claim results.

For a full list of Exhibitors, visit
www.pdac.ca/convention/prospectorstent

TRADE SHOW & TRADE SHOW NORTH

Visit the Trade Show & Trade Show North to come face-to-face with 500 Exhibitors, including countries, companies and organizations promoting technology, products, services and mining jurisdictions worldwide.

Exhibitors include:

- Boart Longyear
- Canadian Northern Economic Development Agency (CanNor)
- Chile, Trade Commission of
- Ecuador Mining
- Fordia
- Geotech Ltd.
- Matawa First Nations
- Northern Ontario Mining Showcase
- Ontario Ministry of Northern Development and Mines
- Peru
- Québec, Gouvernement du
- Schlumberger
- University of Toronto

For a full list of Exhibitors,
visit www.pdac.ca/convention/tradeshow

KIRWIN COLLECTION

The Kirwin Collection was built from hundreds of deposits and localities around the world, and is truly a geological library. It is a resource that provides value in teaching both the fundamentals and the finer points of the geological processes that form the mineral deposits on which we depend.

We've moved to TUESDAY!

Awards Gala & After Party

TUESDAY, MARCH 7th

Fairmont Royal York, Toronto

Celebrate excellence in the global mining industry and network with C-level executives, investors, financiers, brokers and developers!

PURCHASE YOUR TICKETS NOW!

PROUD SPONSORS

AWARDS GALA — Franco Nevada, The GOLD Investment that WORKS

DINNER WINE — CIBC

RECEPTION & AFTER PARTY — OCEANAGOLD

To register for the convention or to purchase tickets visit
www.pdac.ca/convention/register

Networking Events

SUNDAY, MARCH 5

Opening Day Reception
(formerly Welcome Reception)

4:00 – 6:00 pm
Trade Show North, North Building, Level 300

Sponsored by

IBK Capital Corp.
KPMG
PearTree Securities
RBC Capital Markets
Scotiabank

PDAC welcomes you to the largest networking event at the convention. Enjoy a drink and snacks as you connect with attendees, exhibitors and colleagues. Complimentary drink ticket in the All Access Pass bag. Cash bars available.
Admission ONLY with convention pass. Open to all pass types.

MONDAY, MARCH 6

Mineral Outlook Luncheon

12 noon – 2:00 pm
South Building, Level 700
Tickets: $80 (includes 3-course meal, taxes & gratuities)

Sponsored by

EY Building a better working world

IBK Capital Corp.

Global shifts in economics, geopolitics & business: What's it going to take to be successful?

Dr. Dambisa Moyo
Global Economist and Author

Don't miss guest speaker **Dr. Dambisa Moyo**—one of *TIME*'s 100 Most Influential People and *New York Times* best-selling author—as she discusses the defining challenge of our time.

How do we create solid and sustained economic growth and continue to meaningfully put a dent in poverty across the world? How do we restore robust growth in the Eurozone, the United States, and around the industrialized economies creaking under mounting debt, challenging demographics, and stagnating productivity? How do we boost growth in the developing world—home to 90% of the world's population and where, on average, 70% of the population is less than 25 years old—as a period of unprecedented economic expansion begins to slow in some places and regress in others.

Dr. Moyo will address the structural and tactical implications of global macroeconomic trends, why this time is different, and investment opportunities for the future.

MONDAY, MARCH 6

Trade Show Reception
3:00 – 5:00 pm

Trade Show North, North Building, Level 300

Sponsored by

The Lind Partners

Enjoy a glass of wine or beer as you network with Trade Show North exhibitors and attendees from international and domestic companies, including organizations promoting technology, products, services and mining jurisdictions. Complimentary bar beverage ticket in the All Access Pass bag or with your Exhibits pass. Cash bars available.

TUESDAY, MARCH 7

Student-Industry Networking Luncheon

11:30 am – 1:30 pm
North Building, Level 100

The flagship event of the student program, this reception-style buffet luncheon provides an opportunity to make valuable connections with industry professionals and peers. The winner of the Mary-Claire Ward Geoscience Award will be announced as well as the selected 2017 Student-Industry Mineral Exploration Workshop (S-IMEW) students. There will also be a random draw for our annual tuition top-up awards. Proof of student membership is required to claim the award. *RSVP when you register for the convention.*

TUESDAY, MARCH 7

Awards Gala & After Party

Fairmont Royal York, Canadian Room
WE'VE MOVED TO TUESDAY!

The PDAC Awards Gala celebrates industry excellence and brings together the who's who of the global mining industry. Network with C-level executives, investors, financiers, brokers and top decision makers at our exclusive pre-event cocktail reception—followed by a three-course gourmet dinner and fine wines.

Then it's onto the **AFTER PARTY!**

This event will be your chance to meet the 2017 Award Recipients, financiers, brokers and investors! Enjoy two complimentary drink tickets and a great party atmosphere—the perfect backdrop for unlimited networking.

Purchase your tickets now as PDAC honours the companies and individuals who have exhibited outstanding achievement in seven categories.

6:00 – 7:00 pm	Reception
7:00 – 8:00 pm	Dinner
8:00 – 9:00 pm	Awards Presentations
9:00 – 11:00 pm	After Party

Tickets: $125 each (inclusive) **Table of 10:** $1,125 **SAVE $125!**
Dress: Business Attire, Black Tie Optional

Proud Sponsors

Awards Gala

Franco Nevada
The GOLD Investment that WORKS

Dinner Wine

CIBC

Reception & After Party

OCEANAGOLD

WEDNESDAY, MARCH 8

Grand Finale *NEW*
8:00 pm – 12:00 am

Fairmont Royal York, Canadian Room

This is the **GRAND FINALE!**

After four exhilarating days at the world's premier mineral exploration and investment convention...it's time to *party!* Come and enjoy this **free** event. Kick back and rub shoulders with the world's mining community.

Network and schmooze while the Dave Murphy Band performs your favourite chart topping tunes.

Get your two free drink tickets at the door, grab a bite to eat and *dance, dance, dance!* Cash bars available.

Mining Country Sponsors

PDAC is pleased to announce that **Peru** (booth #1423), **Ecuador** (booth #923) and **Chile** (booth #1349) are the official Mining Country Sponsors of the 2017 Convention. We invite you to visit them in the Trade Show, South Building or discover more about these mining countries at their Presentation Rooms.

For more information on our Mining Country Sponsors, please visit **www.pdac.ca/convention/miningcountrysponsors**

Mobile Convention Website

Works just like an app! Just visit **www.pdac.ca/convention** on your smartphone or tablet to launch the mobile website. Plan your time and navigate the convention by building customized schedules into a smartphone calendar when you add events and presentations. You can locate and save exhibitors, view floorplans and so much more.

Enjoy **FREE** Wi-Fi throughout the MTCC (excluding exhibit halls).

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STARS ALIGNING FOR NORTHERN INFRASTRUCTURE PROJECTS

Billions of dollars in mineral wealth lie stranded across northern Canada due to inadequate infrastructure.

But that may be about to change.

BY VIRGINIA HEFFERNAN

A combination of factors, foremost a new commitment to infrastructure spending by the federal government, is literally paving the way for new roads and ports in the North that would improve the economics of undeveloped mineral deposits and exploration.

"You have alignment between industry, mining associations and government on the recognition that the resource industry is the main generator of private sector wealth in the North," says Robin Goad, President of Fortune Minerals, which owns the NICO cobalt-gold-bismuth-copper mine in the Northwest Territories that stands to benefit from recent federal funding commitments. "By providing infrastructure, you lower the threshold of economic viability for these undeveloped resources."

According to a PDAC study, an average of 77% of 1,079 existing discoveries in Nunavut, Northwest Territories and Yukon remain undeveloped, with that proportion rising to 85% in Nunavut. One of the main reasons is cost—remote mines and exploration projects have costs that are at least twice those of projects further south because they lack access to roads or coastal waters.

Some of the richest deposits left stranded include the Mactung tungsten deposit in Northwest Territories, the Izok Lake zinc-copper deposit in Nunavut and the Selwyn zinc-lead deposit in Yukon.

PDAC has been lobbying for a Northern Infrastructure Bank to help unlock these resources since 2013. The association achieved its goal recently when Canada's Finance Minister Bill Morneau announced in his November fiscal update that trade, transport and remote development would be priorities for the proposed Canada Infrastructure Bank. The initial scope of the bank, which has a mandate to invest $35 billion over the next decade, encompassed only green and social infrastructure.

The territorial governments, supported by PDAC, also hope to tap into the $14-billion New Building Canada Fund and P3 Canada Fund for projects of national, regional and local significance to fund new resource roads and ports.

The projects proposed by the Territories, all at different stages of planning, include: upgrading the Goldfield, Casino, Freegold and Nahanni Range roads in the Yukon; extending the Mackenzie Valley Highway from Wrigley to Norman Wells and upgrading other roads in the Northwest Territories; and, in Nunavut, extending the existing road that serves the diamond mines to Grays Bay on the Arctic Ocean and building a winter road south to Manitoba.

In Nunavut, projects announced under the New Canada Building Fund (namely a deep water port in Iqaluit and the Grays Bay road-port project) are slowly moving through the planning process with construction starts expected in 2018, says Jim Stevens, Assistant Deputy Minister of Transportation.

The $85 million port for Iqaluit has reached the environmental engineering stage. Subject to approval from the Nunavut Impact Review Board (NIRB), the territory's

environmental assessment agency, tenders for construction will be issued later in 2017.

Peregrine Diamonds says the port will be "a key component of the infrastructure required to construct and operate a diamond mine" at its Chidliak project 120 km northeast of the Nunavut capital.

West of Iqaluit, the 227 km all-weather Grays Bay road would link the Arctic Ocean to the winter road near the Nunavut-Northwest Territories boundary and provide access to the Izok lake and High Lake zinc-copper deposits owned by China's MMG Resources as well as mineral-rich greenstone belts. Under a partnership with the Kitikmeot Inuit Association (KIA), Nunavut has applied for federal funding for 75% of the initial price tag.

The NIRB will consider the project proposal in early 2017. "That will give us the terms and conditions for environmental and regulatory approvals and place us right where the federal government wants us to be, with a project that is shovel ready," says Jim Stevens, Assistant Deputy Minister of Transportation. The KIA partnership offers an added advantage by sending a signal to Ottawa that the Inuit support the project.

Indeed, after working on securing funding for years, the KIA is looking forward to sealing the deal. Aside from the potential for mine development, "we're optimistic that by changing access from helicopter to terrestrial we'll attract a lot of new exploration activity," says Scott Northey, COO of Nunavut Resources Corporation, the KIA subsidiary which would own and operate the road and port.

In Northwest Territories, the Tibbit to Contwoyyo winter road to the diamond mines that would hook up with the Gray's Bay road is also earmarked for upgrades. The priority is to overcome the growing challenge of operating an ice road as winters become warmer by replacing the southern half with an all-weather road.

Another proposal the federal government agreed to help finance early in 2017 is a 100 km all-weather road connecting the community of Whati, which is currently served by a winter road, to the highway system. The feds will provide up to 25 per cent of the road's construction costs through the P3 Canada Fund. "Next we should be coming out with some formal requests to bid on the work," says Russell Neudorf, NWT's Deputy Minister of Transportation.

Fortune Mineral's Nico Project, and the satellite Sue-Dianne project, will be the main industry beneficiaries of the road construction. Fortune has already spent $116 million to prove up a 33 million tonne reserve at Nico and would extend the Tlicho road another 50 km to provide access to the proposed mine.

In Yukon, the government has applied for federal funding for the Yukon Resource Gateway Project, roadworks that would benefit three potential mines in the Dawson and Nahanni ranges: Goldcorp's Coffee gold deposit; Selwyn Chihong's Selwyn project, one of the largest zinc-lead deposits in the world; and Western Copper and Gold's Casino copper-gold deposit.

The Yukon government has committed $112 million towards the Gateway project and is appealing to the federal government to pitch in $250 million. Industry would contribute another $109 million toward the upgrades.

After decades of stalled initiatives, all three territories are eager to tap into the federal government's new commitment to infrastructure, a pledge that will become clearer when the March 2017 budget is announced.

"There's a recognition of the strong link between transportation infrastructure, economic development, and connecting communities to all-weather road systems," says Neudorf to explain the new optimism. "And with climate change affecting the winter roads, there's an adaption initiative that has good traction with the federal government." **c**

Virginia Heffernan is the Principal of GeoPen Communications and a science and business writer who specializes in mineral and energy resources.

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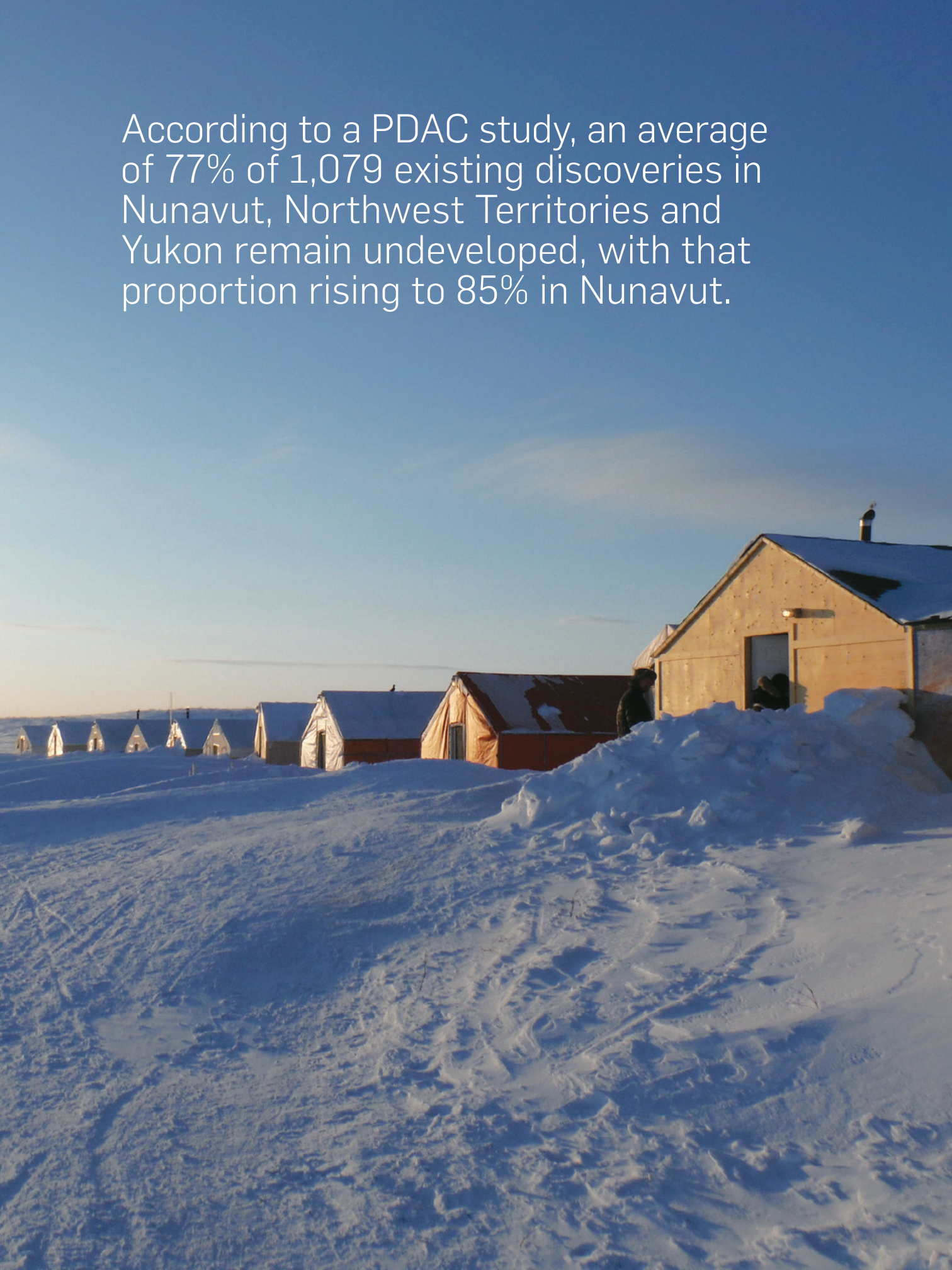

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